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STATISTICAL BULLETIN

Metropolitan Life Insurance Co.

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MORTALITY EXPERIENCE OF THE FIRST NINE MONTHS OF 1923.

The health record for the first nine months of 1923 is more than satisfactory. Among white Industrial policyholders of the Metropolitan Life Insurance Company the death rate for all causes was 8.5 per 1,000. Although this exceeds slightly the figure for the corresponding periods of 1922 and 1921 (8.4 and 8.2 respectively), it is lower than those for the same months of all other years. But for the high mortality from influenza and pneumonia, during the first quarter of the year, the first nine months of 1923 would have registered the lowest death rate ever experienced for a similar period.

Best Quarter on Record.

The death rate of the third quarter was 7.4 per 1,000. **This is the lowest mortality ever recorded for any three months' period in this important cross-section of the American and Canadian populations.** This figure may be compared with those for the third quarters of other years of the last decade, for example, 1922, 7.5; 1921, 7.8; 1916, 10.7; and 1913, 10.9. In each year the rate for the third quarter marked the minimum figure for the year.

Typhoid Fever.

There is every prospect for a further reduction of the mortality from typhoid, in 1923, to a new minimum. Among the white policyholders the rate was 4.2 per 100,000, which may be compared with 4.4 and 5.4 for the same periods in 1922 and 1921 respectively. Th figure for the colored (10.2 per 100,000) was the same as that recorded at this time last year:

Tuberculosis.

A further and very substantial reduction in the tuberculosis death rate is being experienced this year among the white population. Among the colored there has been a marked decline in deaths from the respiratory form accompanied by small increases in the rate for tuberculous meningitis and for other forms of tuberculous disease.

Cancer.

The cumulative death rate for cancer shows a small reduction over the 1922 figure for the first nine months. The change, however, is far too slight to indicate any definite or permanent turn for the better in the course of the mortality from malignant disease.

Diseases Related to Childbearing.

One of the most satisfactory items in the health record of the current year, to date, is the considerable reduction in the death rate for diseases incidental to pregnancy and childbirth. Among white persons insured in the Industrial Department, the rate for the first nine months was 17.7 per 100,000, which marks a reduction of 5.3 per cent. and 9.7 per cent., respectively, over the figures for the corresponding periods of 1922 and 1921. Among the colored, the per-cent. reduction has been even larger.

Measles and Whooping Cough.

The measles and whooping cough death rates, particularly that of the former, are higher than prevailed during the first nine months of 1922 and 1921. During the third quarter of the year, however, the mortality from these diseases fell off appreciably.

Influenza and Pneumonia.

The very high death rate during the first quarter of the year is responsible for the relatively high figure that still obtains for these diseases at the end of nine months. The situation, however, has now cleared up and the mortality from each of these causes has been low in the more recent months.

Cerebral Hemorrhage, Organic Heart Disease and Chronic Nephritis.

Among white policyholders slight declines in the mortality from cerebral hemorrhage and organic heart disease have been experienced; but among the colored the cerebral hemorrhage rate shows an increase from last year, while the mortality from heart disease increased

appreciably. For chronic nephritis the rate has been practically stationary among the white policyholders with a slight drop for the colored.

Alcoholism.

Three hundred and twenty-three deaths from alcoholism corresponding to a death rate of 3.0 per 100,000 were recorded during the first nine months of 1923. This may be compared with 202 deaths and a rate of 2.0 during the corresponding period of last year and with 293 deaths from this cause during the entire year of 1922. During the third quarter of 1923, however, there were fewer deaths from this cause than during either the first or second quarters. Since the first of January, 1922, 616 deaths have been reported from alcoholism, of which 611 occurred in the United States and five in the Canadian Province of Ontario.

Violence.

The situation with reference to violent deaths throughout the year has been the outstanding bad spot in the mortality record. For homicides a small decline among the white policyholders has been accompanied by a rise of 23 per cent. among the colored. It is with respect to accidents, however, that the situation is most unfavorable; for the record shows considerable increases among both the white and colored policyholders. Particularly is this true of automobile fatalities for which class of accidents there was a rise of 8 per cent. among the whites and 53 per cent. among the colored. For suicides the rate is practically unchanged.

The table below presents the death rates among white and colored persons respectively for the first nine months of 1923, 1922 and 1921:

Death Rates per 100,000 Persons Exposed. First Nine Months of 1921, 1922 and 1923 Compared. By Color for Principal Causes of Death. Industrial Department, Metropolitan Life Insurance Company, Premium-Paying Business.

Cause of Death	Death Rates Per 100,000 Persons Exposed					
	White			Colored		
	Jan.-Sept. 1923	Jan.-Sept. 1922	Jan.-Sept. 1921	Jan.-Sept. 1923	Jan.-Sept. 1922	Jan.-Sept. 1921
All Causes of Death	848.3	842.8	820.6	1469.9	1397.9	1353.5
Typhoid fever	4.2	4.4	5.4	10.2	10.2	12.4
Measles	10.3	5.1	4.2	9.1	2.0	1.9
Scarlet fever	5.0	5.5	8.3	1.2	.7	2.6
Whooping cough	4.6	2.6	4.3	8.2	3.6	7.7
Diphtheria and croup	15.4	16.7	23.2	5.0	7.4	5.5
Influenza	32.6	22.5	8.1	69.2	47.4	18.8
Meningococcus meningitis	.7	.7	1.0	.4	.4	1.0
Tuberculosis—all forms	97.3	101.0	101.9	252.5	254.4	278.7
Tuberculosis of respiratory system	88.7	91.3	91.1	230.5	234.5	254.1
Tuberculosis of the meninges, etc	4.2	4.4	5.2	6.1	5.4	6.5
Other forms of tuberculosis	4.5	5.3	5.7	15.9	14.5	18.2
Cancer	71.7	72.9	71.5	68.3	68.8	68.4
Diabetes	17.3	*	*	14.8	*	*
Cerebral hemorrhage; apoplexy	57.2	59.8	57.2	96.7	95.2	88.5
Organic diseases of the heart	121.4	122.9	109.7	206.7	193.4	172.0
Total respiratory diseases	87.7	86.0	79.4	170.7	145.2	129.1
Bronchitis	5.2	5.6	5.3	9.5	11.4	10.6
Bronchopneumonia	27.4	27.1	24.1	40.1	35.8	32.0
Pneumonia—lobar and undefined	47.4	45.7	41.9	109.1	86.7	74.5
Other diseases of respiratory system	7.7	7.6	8.1	11.9	11.3	11.1
Diarrhea and enteritis	10.0	10.8	16.0	12.7	13.8	15.2
Under 2 years	4.6	5.1	6.6	4.1	3.8	3.9
2 years and over	5.5	5.7	9.4	8.6	10.0	11.3
Acute nephritis	4.7	5.3	5.3	14.6	17.2	17.1
Chronic nephritis	64.9	64.6	62.8	114.5	118.5	109.4
Total puerperal state	17.7	18.7	19.6	23.6	27.0	27.7
Puerperal septicemia	6.6	7.0	8.7	9.7	12.1	11.9
Puerperal albuminuria & convulsions	4.1	4.6	4.5	5.7	6.0	7.8
Other diseases of puerperal state	7.0	7.0	6.4	8.2	8.9	8.0
Total external causes	72.3	69.2	69.8	111.4	94.1	99.7
Suicides	8.0	8.3	8.0	5.2	5.0	5.4
Homicides	3.4	3.6	3.5	32.1	26.0	27.8
Accidental and unspecified violence	60.8	57.2	58.2	74.0	63.1	66.4
Accidental drowning	8.0	8.5	9.9	7.1	10.1	11.4
Automobile accidents	14.3	13.2	11.9	11.9	7.8	8.5
All other and ill-defined causes of death	153.1	174.1	172.7	280.1	298.5	297.8

*Not available.

BURNS KILL MORE WOMEN THAN MEN.

Among the many kinds of accidents there is only one—burns—which causes more deaths of females than of males. Statistics covering a long period of years show that three out of every five deaths from this cause are deaths of women and girls. Burns, it should be noted, stand fourth in numerical importance among the causes of accidental death, being outranked only by automobile fatalities, falls and drownings. In 1922, it is estimated that there were not far from 6,300 deaths from this cause in the United States.

How marked is the contrast between burns and other forms of accident is clearly shown by the mortality figures. For example, thirty men to every one woman die each year in electrical accidents. Ten men to every woman are fatally injured by animals. Accidents on steam railroads kill eight males to every one female. For drownings, gun shot wounds and casualties due to horse-drawn vehicles the ratio is about seven males to one female; for lightning strokes, five to one; for cold and freezing, four to one; for street car accidents, three to one; and for accidental asphyxiations, two to one.

The startling contrast in the sex incidence of the mortality for a single form of accident as compared with all other forms, suggests inquiry into the causes which are responsible.

Much light is thrown upon this question by the age distribution of the deaths. About 45 per cent. of the deaths from burns occur in early childhood, that is, from birth through the fifth year. But in these early ages mortality among females is no higher than among males. In fact, during the first three years of life more boys than girls die of burns. With the fourth year, however, the scale turns—and turns sharply. Figures for the United States Registration Area covering a period of twenty-one years, show, with not a single exception, that in the fourth year of life, the relatively high death rate among females begins. The margin increases in the age group five to nine years, where more than twice as many girls as boys die of this cause, and there is a more or less pronounced excess in the death rate for females until age thirty-five is reached. Between thirty-five and forty-five the mortality is about the same for each sex. But after forty-five, pronounced differences again appear, and again for every age group the mortality of women greatly exceeds that of men; and this becomes especially pronounced in old age.

These sex and age figures for fatal accidental burns strongly suggest that dress is an important factor. During infancy and the two years which follow, there is no very marked difference in the way

boys and girls are clothed; and at these ages more boys than girls die of burns, as happens with other kinds of accidents. But after the age of three is reached, the manner of clothing for the boy changes. He ceases to wear dresses and, instead, wears "boys' clothing," and it is coincident with this change in attire that the sex incidence of the mortality from burns also changes and deaths of females begin to predominate. It is not until the age of thirty-five is reached, where very large numbers of men are engaged in industries subjecting them to the hazard of burns and scalds that as many males die from this cause as do females. In later life when fewer men are subject to these risks, women again experience a much higher death rate.

Deaths of women from burns occur at home, for the most part, and arise from their household duties. It is clear that the risk of death from burns among women in the home is greater, on the whole, than is the same hazard among men in industry. It is also clear that the female attire plays an important part in increasing the hazard. In the campaign to reduce the number of deaths and of injuries from burns it would be well, therefore, to concentrate effort on the women folk and, particularly, to teach the need for greater caution in connection with household duties related to the cook stove or the grate fire.

FURTHER FACTS ON HIGH BLOOD PRESSURE.

In our July BULLETIN, we showed that there was no statistical foundation for the assertion that high blood pressure was to any significant degree causally related to such hygienic factors as high protein diet, the excessive use of tobacco, infected tonsils or infected dental tissues. Overweight, alone, seemed to have a definite relationship to high blood pressure. These conclusions were based upon the findings among 16,662 examinations made by the Life Extension Institute of policyholders in the Ordinary Department of the Metropolitan Life Insurance Company in 1921. A further study has been made of the tabulated material according to broad age groups and the resulting facts are given in the table on page 7.

Percentage of Cases Showing High Blood Pressure Readings (20 mm. Hg. or More Above Average for Age) in Each Age Group. 16,662 White Males, Ordinary Department. Metropolitan Life Insurance Company, 1921. Examinations by Life Extension Institute.

Impairment or Hygienic Defect	Total Examined at all ages	Percentage in each Age Group showing Systolic blood pressure 20m.m.Hg. or more above normal					
		All Ages	Under 25	25 to 34	35 to 44	45 to 54	55 and Over
Weight:							
(a) 20% or more overweight	2,033	15.7	5.1	11.2	10.7	22.4	32.0
(b) Normal weight*	4,251	6.1	5.6	4.5	4.0	8.2	23.1
Diet:							
(a) Too high protein diet	6,253	7.3	5.1	5.2	5.7	10.0	22.2
(b) Residue†	10,105	7.4	4.9	5.0	5.3	10.4	23.5
Use of Tobacco:							
(a) Excessive use of tobacco	5,466	6.6	6.8	4.8	4.3	10.8	20.6
(b) Residue†	10,892	7.7	4.3	5.2	6.1	10.0	23.9
Tonsils:							
(a) Enlarged, septic or buried tonsils	4,330	7.4	5.5	5.2	7.1	12.2	26.1
(b) Residue†	12,028	7.3	4.7	5.0	4.9	9.8	22.6
Dental Condition:							
(a) Heavy dentistry	6,904	7.6	6.2	5.6	6.4	10.8	18.1
(b) Residue†	9,454	7.1	4.4	4.7	4.8	9.8	26.2
Total Cases Examined	16,358‡	7.3	5.0	5.1	5.5	10.2	23.1

*Five per cent. above or below average weight for age and height.

†All others not showing specified impairment.

‡In 304 cases, blood pressure readings were not taken.

It will be seen that at each of the age-divisions there was a significantly higher incidence of high blood pressure only among persons showing the specific impairment of overweight. This reinforces the conclusions based upon our former table where the data were aggregated for all ages combined.

For the groups showing other defects in hygiene, or suspected focal infection, the ratios of persons showing high blood pressure were no different at the several age-divisions than for the group not so impaired. In these particulars, the age table also bears out the conclusions shown in the July Bulletin.

LIFE EXPECTATION OF MALES INCREASING AT A GREATER RATE THAN FOR FEMALES.

In the May, 1923, Statistical Bulletin we called attention to the fact that in 1920 and 1921 the death rate of white females in-

sured in the Industrial Department of this Company was higher than the rate for white males.

Since the publication of these figures, in May, the Company has had computed a life table showing by color and sex the comparative expectations of life during the two-year period 1911-1912 and for the year 1922. During this time the life expectancy of white females at age 10 increased only 3.80 years, or 7.5 per cent., while that of white males increased 6.28 years or 13.8 per cent. In the colored group at the same age the margin in favor of the males was also appreciable, showing an increase in life expectancy for negro males of 5.42 years as compared with one of 4.77 years for negro females. Similarly, at the age-divisions of 20, 30, 40 and 50 years, and at the higher ages, for both colored and white persons, the life expectation of males has been increasing at a higher rate than for females.

These figures relate to an important group of the population, namely, the wage-earners and wage-earners' families in American and Canadian cities. The life table is based on more than fourteen and one-half millions of lives, and the results are accurate and significant for this group of the population. Whether or not the greater record of improvement obtains among males in the general population cannot be determined positively until the mortality figures for the whole country become available. Past experience, however, has demonstrated the value of these insurance figures as indices of what takes place in the general population.

HEALTH RECORD FOR SEPTEMBER, 1923.

The September death rate among Metropolitan Industrial policyholders (7.1 per 1,000) is the lowest recorded for any month of this or any other year. It is true that, in the case of a few diseases, the mortality rose as compared with August, 1923, or with September of last year; but for no disease was there registered a death rate so high that it suggests anything but a favorable health situation.

The typhoid fever rate (7.9 per 100,000) declined slightly as compared with August and was fifteen per cent. lower than that for September of last year. This augurs well for the setting of a new minimal typhoid fever rate for 1923.

For accidents there was a sharp drop from the figure registered for the preceding month and the mortality was also slightly lower than that for September, 1922. The record for automobile fatalities is not so satisfactory; for while the death rate declined slightly from the August figure, it nevertheless exceeded that for September of

last year. For automobile accidents, the year's record continues unsatisfactory.

The general death rate in the large cities of the United States in September was 10.8, which was slightly higher than the figure for September of last year and substantially the same as that for August, 1922. Increased morbidity was reported as compared with the preceding month for diphtheria, poliomyelitis, scarlet fever and typhoid fever with declines in the incidence of malaria, measles, smallpox and whooping cough. Comparison with September, 1922, shows increases in the case incidence of measles, smallpox, typhoid and whooping cough, but decreased prevalence of diphtheria, malaria, poliomyelitis and scarlet fever.

In Illinois, case reports of typhoid increased from 137 during the first three weeks of August to 247 during the same period of September; but there were declines in Alabama, Arkansas and North Carolina. More or less serious outbreaks of the disease were reported from Oelwein, Ia.; Florence, S. C.; Herington, Kan., and Peoria, Ill.

The expected seasonal rise in morbidity from diphtheria, as compared with the August record, was in evidence. The most prominent increases were in Alabama, Illinois and Massachusetts.

Measles appears to be subsiding, pronounced drops being recorded in New York, Kansas, Maryland, Massachusetts, Michigan, North Carolina and Wisconsin.

Scarlet fever, like diphtheria, shows a seasonal increase in case prevalence in September. There was an epidemic in Monongah, W. Va., where the opening of the schools was postponed ten days. Poliomyelitis seems to be a little more prevalent than in August. There was a drop in the case incidence of smallpox and also of whooping cough.

According to the United States Public Health Service Report of September 28th there were forty-two cases of "Devil's Grip" in Alabama during the week ended September 22d.

A quite serious outbreak of rabies was reported from Indianapolis, Indiana. Orders were issued that every dog in the city be immunized against the disease without cost to the owners other than the actual cost of the serum.

The National Child Health Association has selected Rutherford County, Tennessee, and Athens, Georgia, for five-year child health demonstrations. DuPage County, Illinois has arranged to provide at public expense the surgical and medical care necessary for the

welfare of children whose parents are unable, financially, to provide such service. Children suffering from diseased tonsils and adenoids will receive special attention. An effort will be made to make the service county-wide, reaching every child whose health and future physical welfare depends upon immediate service and who would not be able to secure it otherwise. During September the Division of Child Hygiene and Public Nursing of the Illinois State Health Department directed "better baby" conferences at many places in the state. A total of 2,291 children between six months and five years of age were examined. The professional services of a physician and nurse were furnished by the Division which also supplied standard record forms and literature for distribution. Local organizations of various kinds, including members of the medical profession, cooperated generously in this work. Another important activity of the Illinois State Health Department was the adoption of standards of infectivity pertaining to venereal diseases. The standards have been printed in pamphlet form and made available to physicians, health officers, social workers, lawyers and judges.

The table below shows the mortality among Industrial policyholders for September, 1923; August, 1923; September, 1922, and for the year 1922.

METROPOLITAN LIFE INSURANCE COMPANY.

Death Rates per 100,000 for Principal Causes, Premium-paying Business in Industrial Department. (Annual Basis)

MONTHS OF AUGUST AND SEPTEMBER, 1923, AND OF SEPTEMBER, 1922.

CAUSES OF DEATH	RATE PER 100,000 LIVES EXPOSED			
	Sept., 1923	Aug., 1923	Sept., 1922	Year 1922
TOTAL—ALL CAUSES	711.0	770.3	742.4	882.9
Typhoid fever	7.9	8.2	9.3	5.7
Measles	1.9	4.1	.9	4.3
Scarlet fever	2.0	1.4	2.6	4.9
Whooping cough	1.8	4.8	2.6	2.6
Diphtheria	9.7	9.0	10.1	18.0
Influenza	3.0	4.0	2.1	21.7
Tuberculosis (all forms)	96.7	105.2	92.8	114.2
Tuberculosis of resp'y system	87.6	94.1	85.5	103.6
Cancer	74.5	68.1	71.3	72.0
Diabetes mellitus	12.4	12.3	*	17.2
Cerebral hemorrhage	48.3	47.5	51.2	62.9
Organic diseases of heart	92.7	104.8	100.5	126.7
Pneumonia (all forms)	26.5	29.1	26.8	73.7
Other respiratory diseases	9.1	7.8	8.0	13.7
Diarrhea and enteritis	15.8	23.2	17.7	10.8
Bright's disease (chronic nephritis)	57.9	58.3	58.7	70.3
Puerperal state	14.6	13.2	14.8	19.0
Suicides	7.7	5.8	8.5	7.5
Homicides	7.0	7.5	8.0	6.3
Other external causes (excluding suicides and homicides)	61.6	73.8	62.5	58.1
Traumatism by automobile	17.6	18.4	16.5	13.6
All other causes	159.9	182.3	194.0	173.3

*Not available.

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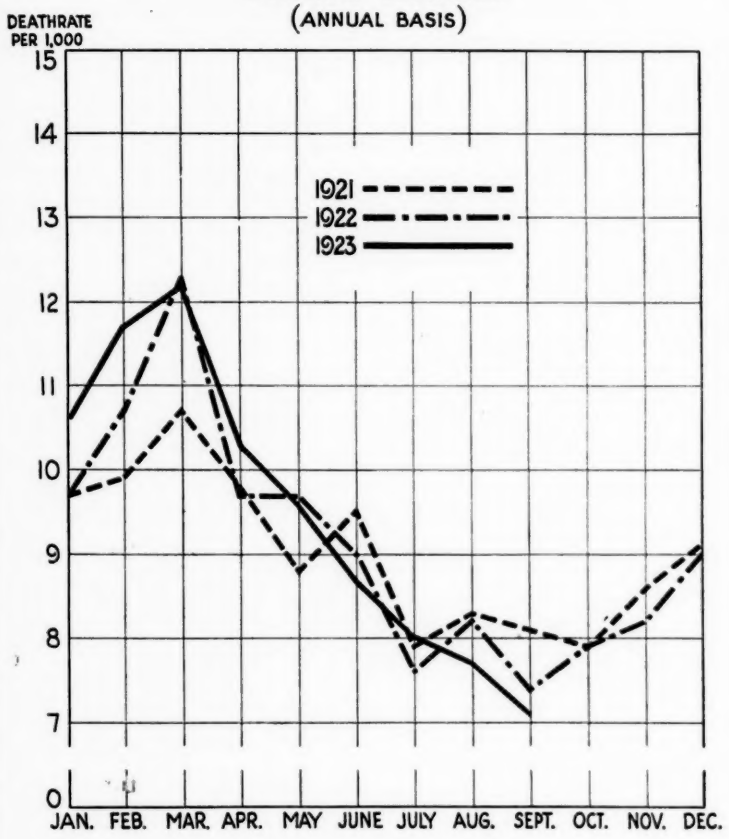
DEATHRATE PER 1,000
in SPECIFIED MONTHS *of*
1921-1922-1923

METROPOLITAN LIFE INSURANCE COMPANY
INDUSTRIAL DEPARTMENT
(ANNUAL BASIS)



	1921	1922	1923
JAN.	9.7	9.7	10.6
FEB.	9.9	10.7	11.7
MAR.	10.7	12.3	12.2
APR.	9.8	9.7	10.3
MAY	8.8	9.7	9.6
JUNE	9.5	9.0	8.8

	1921	1922	1923
JULY	7.9	7.6	8.0
AUG.	8.3	8.2	7.7
SEPT.	8.1	7.4	7.1
OCT.	7.9	7.9	
NOV.	8.6	8.2	
DEC.	9.1	9.0	

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